

Summary of three energy systems p86 text
Work on Energy Systems Worksheet

1. Adenosine Triphosphate

2. Adenosine molecule attached to 3 phosphate molecules

3. Energy is stored in the phosphate bonds

4. 7.6 kcal

5. ATP (ase) All enzymes end in the same. Breaks down the final phosphate mole

6. 3rd) and creates ADP + P

7. Left over ADP is recycled through phosphorylation

8. ATP-PC System (anaerobic alactic), Glycolysis (anaerobic lactic), Oxidative

9. System (aerobic alactic)

10. PC = P + Creatine (Creatine kinase)

11. ADP + P = ATP

12. The fuel source is phosphocreatine and it is found in muscles

13. Creatine kinase is the enzyme that breaks it down

14. 1. 1 ATP is the net yield for this system

15. 2. 0-15 seconds *7 seconds max

16. 3. Power events

17. 4. Limited phosphocreatine stores

18. 5. Glycolysis System, Glucose and Glycogen are the fuel sources found in blood

19. iver

20. 6. Lactic Acid

21. 7. 2 ATP, 15-120 seconds

22. 8. Lactic acid build up in the muscles, impairs the use of the muscles

23. 9. Oxidative System, train your cardiovascular to optimize this energy system

24. 10. Carbohydrates, Fats, Proteins

25. 11. Oxidative phosphorylation

26. 12. 120 seconds + until 2 hours +

27. 13. Aerobic activity

28. 14. Beginning pyruvic acid + oxygen = acetyl coA

29. 15. Oxygen bonds with H+ to create water for thermoregulation

30. 16. NADH's and FADH's

31. 17. Carbon dioxide and water

32. 18. 36 ATP

33. 19. Cardiovascular training (health)

34. 20. Absolutely, increase the concentration of oxygen in the body

35. 21. Carbohydrates oxidizes most efficiently then fats then proteins

36. 22. Very inefficient high O2 demands - over training

Oct 28-7:57 AM

| Summary of Events in Cellular Respiration | | | |
|---|--------------|---------|---|
| Name of Stage | Site in Cell | Net ATP | What Happens |
| a) Glycolysis | Cytoplasm | 2 | Glucose is broken down into pyruvate |
| b) Krebs Cycle | Mitochondria | 2 | Each pyruvate is broken down into Acetic Acid , CO ₂ and Water |
| c) Electron Transport Chain | Mitochondria | 32 | Each Acetic Acid molecule is completely broken down |

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